AMENDMENTS TO THE CLAIMS

1. (Currently amended) A protection circuit for a power ~~management~~ semiconductor ~~devices~~ device having a collector, a gate, and an emitter, the circuit comprising:

a first comparator which detects a collector voltage of said power ~~management~~ semiconductor device to output a ~~fist~~ first detection signal when the detected collector voltage exceeds a first reference voltage;

a second comparator which detects a gate voltage of said power ~~management~~ semiconductor device to output a second detection signal, when the detected gate signal exceeds a second reference voltage which is ~~a minimum gate voltage for feeding a rated power to said power management semiconductor device or over, and less than~~ set to be lower than a line power voltage of a drive circuit for outputting a drive signal that drives said power ~~management~~ semiconductor device and higher than a terraced voltage of the power semiconductor device;

logic means for outputting a protection start signal when both the first and second detection signals are being outputted; and

gate voltage reduction means for reducing said gate voltage in accordance with the protection start signal from said logic means,

said power semiconductor device being a trench type power semiconductor device.

2. (Currently amended) The protection circuit ~~for power management semiconductor devices~~ according to claim 1, wherein said second comparator detects said gate voltage based on a voltage ~~separated by a separation resistance for separating~~ obtained by

dividing a gate voltage of said power ~~management~~ semiconductor device by voltage dividing resistors.

3. (Currently amended) The protection circuit ~~for power management semiconductor devices~~ according to claim 1, wherein said gate voltage reduction means cuts off a drive signal of said drive circuit and reduces said gate voltage such that it sequentially decreases.

4. (Currently amended) The protection circuit ~~for power management semiconductor devices~~ according to claim 2, wherein said gate voltage reduction means cuts off a drive signal of said drive circuit and reduces said gate voltage such that it sequentially decreases.

5. (Currently amended) The protection circuit ~~for power management semiconductor devices~~ according to claim 1, wherein the first reference voltage of said comparator is ~~a collector voltage during the time when said power management semiconductor device is electrically continuous, or over, and less~~ set at a voltage which is higher than an On-state collector voltage and lower than a line power voltage of said drive circuit.

6. (Currently amended) The protection circuit ~~for power management semiconductor devices~~ according to claim 2, wherein the first reference voltage of said comparator is ~~a collector voltage during the time when said power management semiconductor~~

~~device is electrically continuous, or over, and less~~ set at a voltage which is higher than an On-state collector voltage and lower than a line power voltage of said drive circuit.

7. (Currently amended) The protection circuit ~~for power management semiconductor devices~~ according to claim 3, wherein the first reference voltage of said comparator is ~~a collector voltage during the time when said power management semiconductor device is electrically continuous, or over, and less~~ set at a voltage which is higher than an On-state collector voltage and lower than a line power voltage of said drive circuit.

8. (Currently amended) The protection circuit ~~for power management semiconductor devices~~ according to claim 4, wherein the first reference voltage of said comparator is ~~a collector voltage during the time when said power management semiconductor device is electrically continuous, or over, and less~~ set at a voltage which is higher than an On-state collector voltage and lower than a line power voltage of said drive circuit.

9. (Currently amended) The protection circuit ~~for power management semiconductor devices~~ according to claim 1, wherein said first comparator, second comparator, logic means, and gate voltage reduction means are formed in semiconductor integrated circuits together with said drive circuit.

10. (Currently amended) The protection circuit ~~for power management semiconductor devices~~ according to claim 2, wherein said first comparator, second comparator,

logic means, and gate voltage reduction means are formed in semiconductor integrated circuits together with said drive circuit.

11. (Currently amended) ~~A power converter~~ An inverter for converting [[AC]] DC current to [[DC]] AC current, the ~~converter~~ inverter comprising:

a power semiconductor device for converting DC current to AC current; and

a ~~power management semiconductor device~~ control unit which controls a switching operation of said power semiconductor ~~device;~~ device, said control unit comprising:

a first comparator which detects a collector voltage of said power ~~management~~ semiconductor device to output a ~~fist~~ first detection signal when the detected collector voltage exceeds a first reference voltage;

a second comparator which detects a gate voltage of said power ~~management~~ semiconductor device to output a second detection ~~signal~~ signal, when the detected gate signal exceeds a second reference voltage which is ~~a minimum gate voltage for feeding a rated power to said power management semiconductor device or over, and less than~~ set to be lower than a line power voltage of a drive circuit for outputting a drive signal that drives said power ~~management~~ semiconductor device and higher than a terraced voltage of the power semiconductor device;

logic means for outputting a protection start signal when both the first and second detection signals are being outputted;

gate voltage reduction means for reducing said gate voltage in accordance with the protection start signal from said logic means; and

computer processor means for controlling the ON/OFF operation of said power ~~management~~ semiconductor ~~device~~ device.

said power semiconductor device being a trench type power semiconductor device.

12. (Currently amended) A hybrid electric vehicle having an internal combustion engine, an electric motor, a transmission for transmitting power from said internal combustion engine and/or said electric motor to wheels, an inverter unit for converting DC power to AC power, and a DC power storage unit, wherein

said electric motor is an AC motor driven by AC power from said inverter unit~~, and said inverter unit is the power converter~~ including the inverter according to claim 11.

13. (Currently amended) An electric vehicle having an electric motor, a transmission for transmitting power from said electric motor to wheels, an inverter unit for converting DC power to AC power, and a DC power storage unit, wherein

said electric motor is an AC motor driven by AC power from said inverter unit~~, and said inverter unit is the power converter~~ including the inverter according to claim 11.